Climate Change and Air Quality





ESCos: Catalysing Climate Action and Economic Transformation in South Africa

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Emperors Palace, Ekurhuleni, South Africa

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

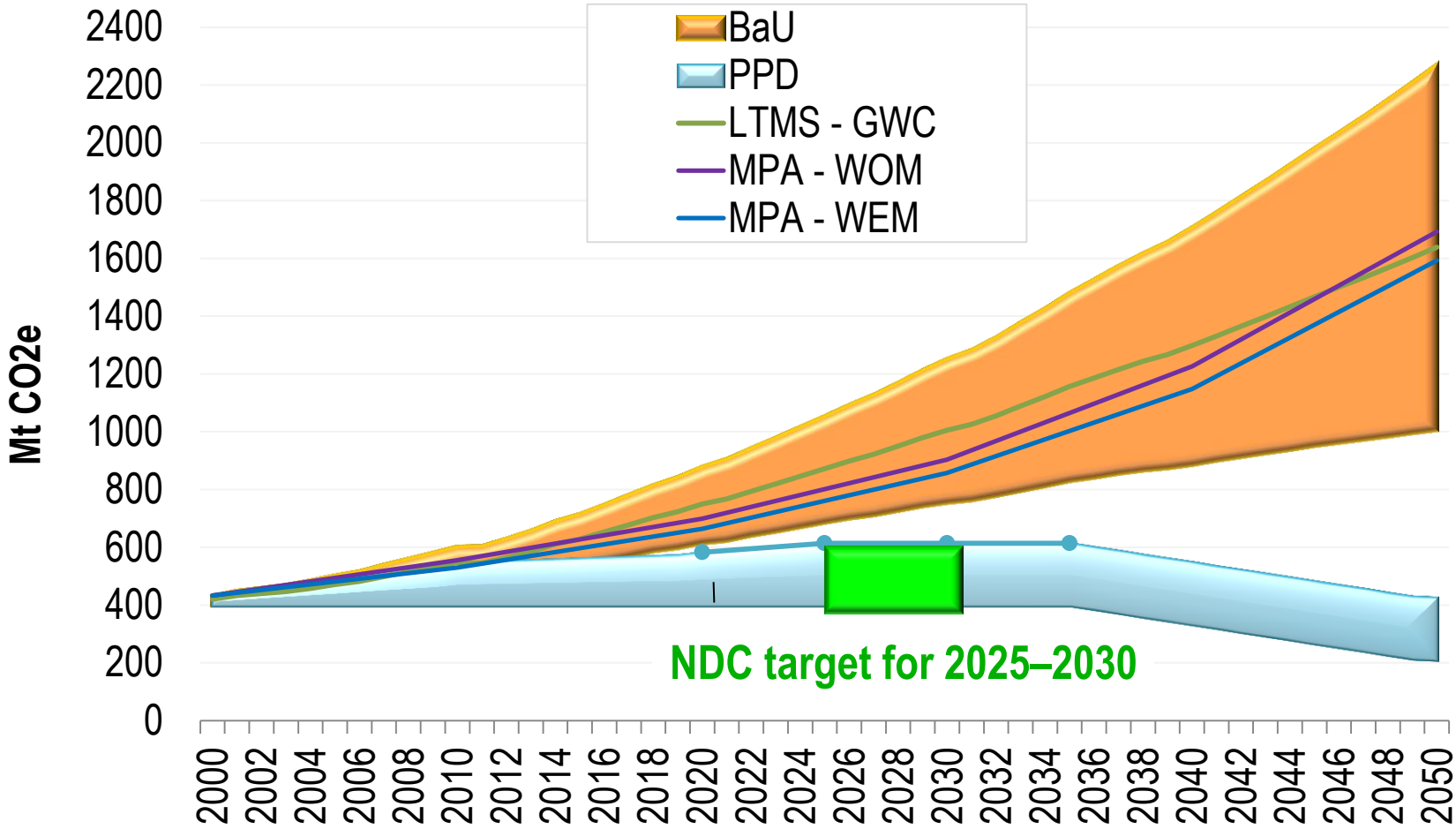
2030 NDP

South Africa and Paris COP 21 Agreement

Transitioning to a Low-carbon and Climate Resilient Economy and Society

- South Africa submitted its nationally determined contribution (NDC) in 2015 and reaffirmed its commitment to making a fair contribution to global efforts to mitigate climate change, ratifying the Paris Agreement in November 2016
- South Africa greenhouse gas (GHG) emissions trajectory should peak by 2025, plateau between 2025 – 2035 and decline thereafter within an range of 398 to 614 Mt CO2eq
- Pre-2020 implementation is the foundation for meeting post 2020 commitments
- The National Climate Response Policy (NCCRP) and South Africa's NDC call for climate action that builds and sustains economic growth and development
- South Africa already has well-developed base for implementing climate action on a national scale and responding to the key criteria of economic growth and development, through Climate Change Flagship Programmes

GHG Emissions Reduction Pathways for South Africa



The Case for Scaling Up South Africa's Energy Efficiency and Demand Management Flagship Programme

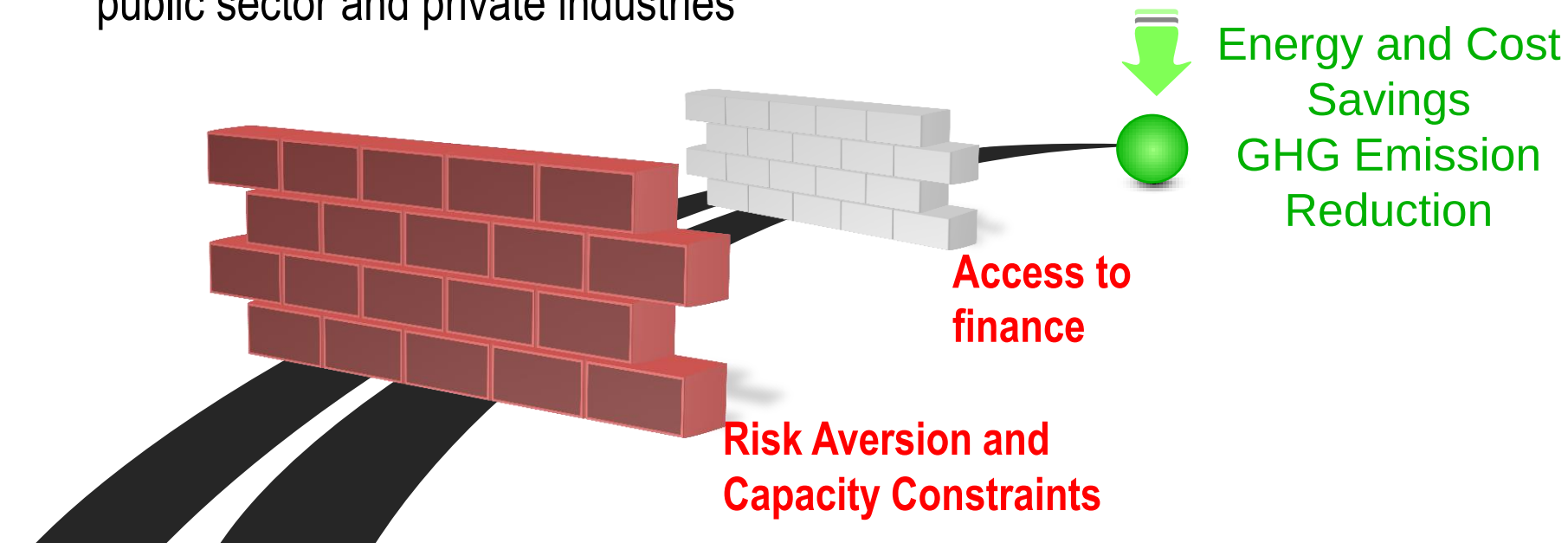
- Energy efficiency is globally recognised as one of the most important and cost-effective means for meeting growing energy demands and mitigating GHG emissions and has enormous potential in South Africa
- Harnessing energy efficiency can facilitate more efficient allocation of resources across the global economy, potentially boosting economic output by US$18 trillion through 2035
- Although energy-efficiency practices are gaining traction globally, their uptake is still less than optimal, and this is especially true of South Africa.
- The Energy Efficiency and Demand Management Flagship Programme led and coordinated by the Department of Energy, seeks to realise the multiple benefits of scaled-up energy efficiency, informed by the National Energy Efficiency Strategy and responding to both the NCCRP and NDC

The Value of Energy Efficiency in South Africa's Development and Climate Change Response

Creates and Protects Long-term Employment Opportunities	Enhanced Asset Values	Energy Savings	GHG Emissions Savings
Enhanced Energy Security	Stabilise Energy Prices	Macro-economic Impacts	Industrial Productivity and Competitiveness
Reduce Local Air Pollution	Increase Disposable Income	Free Up Fiscal Resources	Enhanced Public Services

Energy Services Companies in South Africa's Development and Climate Action (1)

- Energy Services Companies (ESCOs) are private-sector instruments key to transforming the "efficiency gap" into a viable business, especially in emerging markets
- ESCOs can contribute to substantial savings in the public and private sectors by helping to overcome two of the principal barriers to energy efficiency investment by public sector and private industries



Energy Services Companies in South Africa's Development and Climate Action (2)

- ESCOs catalyse a transition to an energy economy in which profits are based on energy services delivered at the lowest energy cost
- The key actors are the local energy companies that are increasingly implementing energy services as part of their market offering and developing service portfolios.
- ESCO's can help scale up energy efficiency by offering specialised technical and financial services for project design and implementation

Energy Auditing	Design and Engineering	Procurement, Construction, Installation and Commissioning
Measurement and Verification (M&V) of Energy and Cost Savings	Operation and Maintenance (O&M)	Asset Management Services

Barriers to the Development of ESCO Markets for Energy Efficiency

M&V

- The ESCO industry relies on these well-proven, standardised methodologies to ensure accountability and sustainability of projects
- Despite the importance of the M&V function, the process is often neglected by ESCOs and can delay critical project milestones

Risk

- Compared with conventional energy efficiency projects, Energy Performance Contracting projects present a different risks
- Key risks to ESCOs are possible payment default of hosts, uncertainty of baseline measurement, and increase in installation costs
- For hosts, concerns include payback periods, project complexities and repayment ability
- Solutions include the promotion of successful projects, modification of government procurement practices and government guarantees of loans

Finance

- A lack of access to appropriate financing mechanisms is one of the important barriers

Fostering the Development of ESCO Markets for Energy Efficiency

M&V:

- Incorporating independent measurement and verification into core ESCo processes is key

Finance:

- Development of specialised energy efficiency financing windows in appropriate financial institutions
- Development of skills for energy efficiency project appraisal
- Design of specialised financial products are other measures to accelerate the diffusion of energy efficiency

Risk mitigation

- Solutions include the promotion of successful projects
- Modification of government procurement practices and government guarantees of loans

Institutional Enablers

- In this regard, the role of government as a market creator as well as a rule setter through removing barriers and mobilizing necessary capital is required to promote ESCOs .
- Government still has a role in education, policy, and residential sector solutions. Greater details and data on the energy savings produced by ESCO projects are needed

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